



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/749,378 | 01/02/2004 | Kobayashi Shozo | 1594.1303 | 9137 |
| 21171 | 7590 | 12/27/2005 | EXAMINER | |
| STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | LEUNG, PHILIP H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3742 | |

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

88

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/749,378 | SHOZO ET AL. | |
| | Examiner | Art Unit | |
| | Philip H. Leung | 3742 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-14, 20-23, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 8, 15-19 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Fioroli (GB 2 112 610) (previously cited).

Fioroli shows a microwave convectional oven comprising a cabinet to define a cooking cavity 1 therein, the cooking cavity being open at a front thereof; a fan chamber 5 defined by recessing a rear wall 4 of the cooking cavity at a predetermined area to a predetermined depth; an air circulation fan 6 installed in the fan chamber to circulate air of the cooking cavity; a heater 7 installed in the fan chamber to heat the air; and a chamber cover 3 mounted to the rear wall of the cooking cavity to cover an open front of the fan chamber, the chamber cover having a plurality of air suction ports 11 (area A) at a central area thereof, with a plurality of air distribution ports 11 (areas B and/or C) provided along an edge of the chamber cover to guide the air from the fan chamber to the edge of the chamber cover to discharge the air to the cooking cavity. As all of the plurality of air distribution ports are provided along the edge of the chamber cover therefore it is inherent that the air is not directly forced onto food in the cooking cavity (see Figures 1-4 and page 1, line 86 – page 2, line 76). In regard to claim 26, see page 2, lines 114-129.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 are rejected under 35 U.S.C. 103(a) as being obvious over Fioroli (GB 2 112 610), in view of McFadden et al (US 6,376,817) (previously cited).

As set forth above, Fioroli shows every feature as claimed except for the shape of the air distribution ports. McFadden shows that it is well known in the art of microwave convectional ovens to form the air distribution ports in the shape of protuberant nozzles 26 to increase air speed toward the food more directly (see Figure 1, col. 6, lines 10-67 and col. 7, lines 41-56). It would have been obvious to an ordinary skill in the art at the time of invention to modify Fioroli to use protuberant nozzles as air distribution ports for better heating efficiency and better baking result, in view of the teaching of McFadden.

5. Claims 4, 6, 7, 9-12 and 23 are rejected under 35 U.S.C. 103(a) as being obvious over Fioroli (GB 2 112 610), in view of Takakura (JP 56-102623) (previously cited).

As set forth above, Fioroli shows every feature as claimed except for the use of a coating on the chamber surfaces. Takakura shows that it is well known in the art of microwave ovens to coat the oven chamber surfaces with an insulating material to prevent generation of sparks in the oven (see Figure 1 and the English abstract). It would have been obvious to an ordinary skill in the art at the time of invention to modify Fioroli to use a coating on the chamber surfaces to reduce sparks for a safer microwave cooking device, in view of the

Art Unit: 3742

teaching of Takakura. In regard to claims 6, 7 and 12, Fioroli also shows the use of setscrews for mounting the fan assembly (see Figure 4 and page 2, lines 49-62). The exact arrangement would be a matter of engineering variations. In regard to claim 23, the use of a fan for cooling the magnetron and the transformer of a microwave oven is considered essential and routine in the art to prevent overheating of these components.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fioroli (GB 2 112 610), in view of Takakura (JP 56-102623), as applied to claims 4, 6, 7, 9-12 and 23 above, and further in view of McFadden et al (US 6,376,817) (previously cited).

As set forth above, Fioroli combined with Takakura shows every feature as claimed except for the shape of the air distribution ports. McFadden shows that it is well known in the art of microwave convectional ovens to form the air distribution ports in the shape of protuberant nozzles 26 to increase air speed toward the food more directly (see Figure 1, col. 6, lines 10-67 and col. 7, lines 41-56). It would have been obvious to an ordinary skill in the art at the time of invention to modify Fioroli combined with Takakura to use protuberant nozzles as air distribution ports for better heating efficiency and better baking result, in view of the teaching of McFadden.

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fioroli (GB 2 112 610), in view of Takakura (JP 56-102623), as applied to claims 4, 6, 7, 9-12 and 23 above, and further in view of Yasuoka (US 3,692,968) (previously cited).

As set forth above, Fioroli combined with Takakura shows every feature as claimed except for the use of a mode stirrer. Yasuoka shows that it is well known in the art of microwave ovens to use a mode stirrer for stirring the microwave supplied from the magnetron to the cooking chamber (see Figures 1 and 4 and col. 2, line 58 - col. 3, line 3). It would have been obvious to an ordinary skill in the art at the time of invention to modify Fioroli to use a rotating stirrer for stirring the microwave radiation pattern for more uniform and better cooking result, in view of the teaching of Yasuoka.

8. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being obvious over Fioroli (GB 2 112 610)), in view of Fleiter et al (US 4,970,372) (previously cited).

As set forth above, Fioroli shows every feature as claimed except for the use of a heat shield mounted on the outer surface of the cooking chamber. Fleiter shows that it is well known in the art of convectional ovens to use a heat shield 14 between the fan motor¹² and the fan chamber 10 to protect the motor (see the Figure and col. 3, lines 32-46). It would have been obvious to an ordinary skill in the art at the time of invention to modify Fioroli to use a heat shield to protect the motor from overheating, in view of the teaching of Fleiter.

9. Claims 8, 15-19 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Applicant's arguments filed 9-21-2005 have been fully considered but they are not persuasive. The argument that "the perforations provided in the panel 3 of Fioroli are distributed throughout all of the zones A, B, C Fioroli teaches away from the claimed invention that the air is not directly forced onto food in the cooking cavity" is not well taken. It is pointed out that "the perforations in zones A, B and C of Fioroli shows hot air to be directly forced onto food in the chamber 1" as argument is incorrect. It is clear that the perforations in central zone A are not located along the edge and they are air suction ports as claimed (see page 2, lines 1-6). The perforations 11 in zone A are clearly equivalent to the suction ports 41 of the invention. Only the perforations in zone B and C function as the claimed plurality of air distribution ports and they are provided only along the edge and therefore would not directly force air onto the food in the cooking cavity as claimed. In regard to claim 2, the use of protuberant parts as the air distribution ports is clearly taught by McFadden as it uses nozzles 26 for directing the air flow. It would have been obvious to modify Fioroli to use protuberant nozzles as air distribution ports for better heating efficiency and better baking result, in view of McFadden. Only claims 8, 15-19 and 24 include subject matter not shown or suggested in the prior art of record.


11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 472-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
12-21-2005